UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Forest
Site ID: F039XA001NM
Site Name: *Pinus ponderosa* Zuni Mountains
Major Land Resource Area and Common Resource Area MLRA 39 CRA – NM1
Precipitation or Climate Zone: 17-25" New Mexico Mountains - Zuni
Phase:

ORIGINAL SITE DESCRIPTION APPROVAL:

Site Date: June 26, 2002
Site Author: Steve Lacy
Site Approval:
Approval Date:

REVISIONS:

Revision Date:
Revisor:
Revision Approval:
Approval Date:
Revision Notes:

PHYSIOGRAPHIC FEATURES

Narrative:

The Ponderosa pine community is found from 6,500 – 8,000 feet. It is the dominant forest type in the Zuni mountains.

The Zuni's are a 75-85 mile long structural rise. They are domed mountains with an igneous core and sedimentary rocks draping away from the core. The mountains consist of rolling uplands and gentle slopes.

LAND FORM:

1. mountain slopes
2.
3.

ASPECT:

1.
2.

3.

	Minimum	Maximum
Elevation (feet)	7,200	8,200
Slope (percent)	1	40
Water Table Depth (inches)	none	

Flooding:	Minimum	Maximum
Frequency	none	
Duration		

Ponding:	Minimum	Maximum
Depth (inches)	none	
Frequency		
Duration		

Runoff Class:

medium to very high

CLIMATIC FEATURES

Narrative:

An area of mountains, and valleys with cold and wet winters. Summers are warm and the monsoon season rains supply significant moisture.

	Minimum	Maximum
Frost-free period (days):	90	110
Freeze-free period (days):		
Mean annual precipitation (inches):	16	22+

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Avg. Precip. In.	Avg. Snowfall Total	Temp. Min.	Temp. Max.
January	1.74	10.9	9.0	39.9
February	1.42	9.6	12.0	42.4
March	1.83	11.3	18.0	47.6
April	1.10	3.4	24.3	56.3
May	0.80	0.4	31.3	66.1
June	0.68	0.0	39.1	77.6
July	2.45	0.0	46.3	80.7
August	2.78	0.0	45.4	77.8
September	1.61	0.0	38.0	72.8
October	1.53	1.8	27.7	63.2
November	1.50	5.8	17.3	50.0
December	1.43	11.2	10.1	41.6

Climate Stations:

			Lat	**Long**		**Period**		
Station ID	McGaffey	Location	3523	10833	From:	1949	To:	1956
Station ID		Location	3520	10827	From:	1956	To:	1989
Station ID		Location	3520	10827	From:	1989	To:	1999
Station ID		Location			From:		To:	
Station ID		Location			From:		To:	

INFLUENCING WATER FEATURES

Narrative:

Wetland description:

System	Subsystem	Class

If Riverine Wetland System enter Rosgen Stream Type:
A-2

REPRESENTATIVE SOIL FEATURES

Narrative:
These soils are shallow to deep, well-drained, moderate to slowly permeable soils formed in medium to fine textured material. These soils are on mountain slopes and cuestas. Slopes range from 1 to 40 percent.

Parent Material Kind: Colluvium and slope alluvium
Parent Material Origin: Sandstone, shale, limestone, and granite

Surface Texture:

1. loam's
2. sandy loam's
3. clay loam's

Surface Texture Modifier:

1. none to extremely
2.
3.

Subsurface Texture Group:
Surface Fragments <=3" (% Cover): 0-45
Surface Fragments >3" (% Cover): 0-20
Subsurface Fragments <=3" (%Volume): 0-45
Subsurface Fragments >=3" (%Volume): 0-35

	Minimum	Maximum
Drainage Class:	well	
Permeability Class:	0.06	2.0
Depth (inches):	10"	60"
Electrical Conductivity (mmhos/cm):	0	2
Sodium Absorption Ratio:	0	0
Soil Reaction (1:1 Water):	6.6	7.6
Soil Reaction (0.1M CaCl2):	-	-
Available Water Capacity (inches):	1"	9"
Calcium Carbonate Equivalent (percent):	0	2

Soil survey associations:

This ecological site is associated with the map units and soil components in the following soil surveys. Future updates to this soil survey may affect these associations. For up-to-date associations between soil components and this ecological site, refer to NASIS. Associations between ecological sites and soil components are maintained in NASIS via the ecological site ID.

MAP UNIT NAME

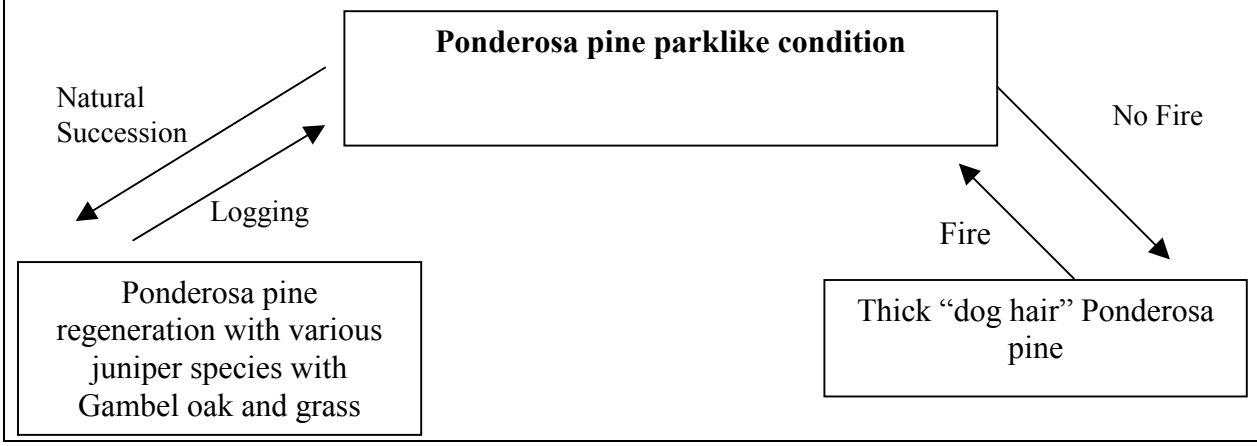
Soil survey	Map unit symbol	Soil components
McKinley	405	Fort Wingate
	407	Cinnadale
		Heckly
		Zuni

PLANT COMMUNITIES

Ecological Dynamics of the Site:

The Ponderosa pine forest is the lowest of the true forest zones. The elevation for this forest ranges between 6,500-8,000 feet. This forest is found in areas of moderate moisture but it occupies areas of relatively dry and sandy soil. The forest may consist of widely scattered individuals or grow in parklike stands on dry hillsides or plateaus. On cooler northern slopes the stands are thicker and include Douglas-fir. On the lower elevations, Pinyon pine and juniper (sp.) will be found.

Plant Communities and Transitional Pathways (diagram)



Interpretive Plant Community: Naturalized Plant Community

Ground Cover and Structure:

Cover Type	Percent Ground Cover by Height Class (feet)								
	<.5	.5-1	>1-2	>2-4.5	>4.5-13	>13-40	>40-80	>80-120	>120
Grass/Grass Like									
Forb									
Shrub/Vine									
Tree									
Lichen									
Moss									
Litter									
Course Fragment									
Bare Ground									

Forest Overstory Composition:

The typical forest overstory composition of the historic climax community.

Common Name	**Scientific Name**	**Percent Composition (percent by frequency)**
Ponderosa pine	*Pinus ponderosa*	
Rocky Mountain juniper	*Juniperus scopulorum*	
One-seed juniper	*Juniperus monosperma*	
Total		

Forest Understory Composition:

The typical annual production of understory species to a height of 4.5 feet (excluding boles of trees) under low, high, and representative canopy covers.

		Annual Production Per Acre Percent and Pounds (air-dry weight)					
		Canopy Cover Percent					
		80		**90**		**100**	
Common Name	**Scientific Name**	%	lbs	%	lbs	%	lbs
Gambel oak	*Quercus gambelii*						
Total Annual Production							

Typical Climax Community:

Large, scattered Ponderosa pines scattered in a parklike setting on mountain slopes and rolling hills.

Plant Community: (as it exists today)

Medium to young aged Ponderosa pines with scattered larger trees.

Ground Cover and Structure:

	Percent Ground Cover by Height Class (feet)								
Cover Type	<.5	.5-1	>1-2	>2-4.5	>4.5-13	>13-40	>40-80	>80-120	>120
Grass/Grass Like									
Forb									
Shrub/Vine									
Tree									
Lichen									
Moss									
Litter									
Course Fragment									
Bare Ground									

Forest Overstory Composition:

The typical forest overstory composition of the historic climax community.

Common Name	Scientific Name	Percent Composition (percent by frequency)
Ponderosa pine	*Pinus ponderosa*	93
Rocky Mountain juniper	Juniperus scopulorum	7

Forest Understory Composition:

The typical annual production of understory species to a height of 4.5 feet (excluding boles of trees) under low, high, and representative canopy covers.

		Annual Production Per Acre Percent and Pounds (air-dry weight)					
		Canopy Cover Percent					
		75		85		95	
Common Name	Scientific Name	%	lbs	%	lbs	%	lbs
Gambel oak	*Quercus gambelii*						

Plant Community: (as it exists today)

ECOLOGICAL SITE INTERPRETATIONS

Forest Site Productivity

		Annual Productivity (per acre per year)						
		Site Index		Cubic Feet (CMAI)		Other Units		
Common Name	**Scientific Name**	Low	High	Low	High	Low	High	Unit
Ponderosa pine	Pinus ponderosa		56					

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		Map Unit Name
Soil Survey	Map Unit Symbol	Soil Components

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Ponderosa forests include elk, mule deer, black bear, mountain lions, rabbits, songbirds, and ground squirrels.

Plant Preference by Animal Kind:

Animal Kind: _____

Animal Type: _____

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D

Animal Kind: _____

Animal Type: _____

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D

Hydrology Functions:

Recreational Uses:

Wood Products:

1. saw logs
2. vigas
3. firewood

Other Products:

Other Information:

Supporting Information

Associated Sites:

Site Name	Site ID	Site Narrative

Similar Sites:

Site Name	Site ID	Site Narrative

Inventory Data References (narrative):

Inventory Data References:

Data Source	Number of Records	Sample Period	State	County

State Correlation:
This site has been correlated with the following sites: _____

Type Locality:
State: New Mexico
County: McKinley
Latitude:
Longitude:
Township: T 13 N
Range: R 16 W
Section: Sec 22

Is the type locality sensitive? Yes ☐ No ☐

General Legal Description: _____

Relationship to Other Established Classifications:

Other References: